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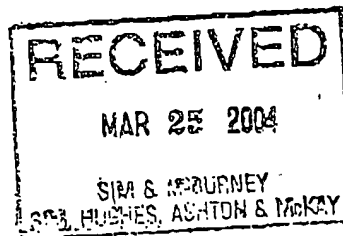
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March 22, 2004

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MAR 25 2004

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Application No.	:	**2,398,865**
Owner	:	MATSUSHITA GRAPHIC COMMUNICATION SYSTEMS, INC.
Title	:	*ACTIVATION OF MULTIPLE XDSL MODEMS WITH IMPLICIT CHANNEL PROBE*
Classification	:	H04L-12/12
Your File No.	:	**9116-125 LAB:as**
Examiner	:	Chapman Wong

YOU ARE HEREBY NOTIFIED OF :

- *A REQUISITION BY THE EXAMINER IN ACCORDANCE WITH SUBSECTION 30(2) OF THE PATENT RULES;*
- *A REQUISITION BY THE EXAMINER IN ACCORDANCE WITH SECTION 29 OF THE PATENT RULES.*

*IN ORDER TO AVOID **MULTIPLE ABANDONMENTS** UNDER PARAGRAPH 73(1)(A) OF THE PATENT ACT, A WRITTEN REPLY **TO EACH REQUISITION** MUST BE RECEIVED WITHIN **SIX** MONTHS AFTER THE ABOVE DATE.*

This application has been examined taking into account applicant's correspondence received in this office on May 26, 2003.

The number of claims in this application is 33.

A search of the prior art has revealed the following:

References applied
Document
"Procedures for the identification and selection of common modes of operation between data circuit-terminating equipments (DCEs) and between data terminal equipments (DTEs) over the general switched telephone network and on leased point-to-point telephone-type circuits, ITU-T V.8 bis" ITU-T RECOMMENDATION V.8 BIS (08/96), August 1996 (1996-08), pages 1-43

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European Patent Documents
0,831,624   25 March 1998   Chen
0,513,527   19 November 1992   Sridhar et al.

ITU-T Recommendation V.8 bis defines signals, messages and procedures for exchanging over the GSTN and on leased point-to-point telephone-type circuits, when the modes of operations of DCEs and DTEs communicating over the connection need to be automatically established and selected, but before signals are exchanged which are specific to a particular Recommendation.

Chen discloses a modem that operates selectively in the voice-band frequency band and at higher frequency bands. This modem supports multiple line codes, like DMT and CAP. The modem uses a Digital Signal Processor (DSP), so that different existing ADSL line codes, such as Discrete MultiTone (DMT) and Carrierless AM/PM (CAP), can be implemented on the same hardware platform. The modem negotiates in real-time, for a desired line transmission rate to accommodate line condition and service-cost requirement. The line code and rate negotiation process may be implemented at the beginning of each communication session through the exchange of tones between the modems. A four-step MDSL modem initialization process is provided for line code and rate compatibility. A new synchronization startup procedure for CAP based MDSL modems is provided. The handshake protocol and receiver algorithm allow reliable modem synchronization over severely amplitude distorted channels such as standard telephone twisted-pair wire. An internal state machine in an MDSL modem records and monitors the line status and notifies the state change to the other MDSL and also the host processor.

Sridhar et al. disclose a two wire modem that selects a carrier frequency and a baud rate from a predetermined plurality of carrier frequencies and baud rates to communicate with another modem over a communication media in a full duplex mode based on estimated characteristics of the communication media. The two-wire modem for communicating with a remote modem over a communication medium comprises a transmitter for transmitting signals onto the communication medium, a receiver for receiving signals from the communication medium, a line probing processor for sending and receiving line probing signals, and an echo canceller for cancelling echoes in the communication medium.

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Obviousness

The first predetermined signal, comprising an MS signal has already been disclosed by the Recommendation (Section 6.4 and Section 9.1 Table 7). Furthermore, features such as the MS, MR, ACK, NACK, CL and CLR signals have already been taught by the Recommendation. Reference maybe be made to Section 6 and Section 9.1 Table 7.

Chen describes a new rate negotiation method that enables a variable-rate DSL (VRDSL) system. Using the rate negotiation method, the variable rate system adapts its throughput based on line conditions, computational capabilities, network accessibility, and application requirements. The initialization process is comprised of channel probing, line code selection, rate negotiation and transceiver training. During channel probing, an MDSL modem at the subscriber-end sends probing tones in the upstream band for a certain duration. After the first duration, the MDSL modem at the central office end responds with channel probing tones in the downstream band. Although tones are sent upstream and downstream in Chen, while signals are transmitted and received in the present inventions, the minor difference is obvious.

The transmission rate preference at the subscriber end depends on the line condition, hardware capability, and user choice or application requirements. Similar to Chen, the present application exchanges line condition through signals.

There is no inventive step shown in using channel probing for the activation of XDSL modems in the present invention that would overcome what has already been disclosed in the art of telecommunications. Channel probing is well known in the art of telecommunications, especially in the voice band. The use of a conventional startup sequence or initialization process to test or indicate the constitution or condition of the communication channel between the modems has already been taught by Chen.

Similar to Sridhar et al., the present application describes the receiving and sending of line probing signals. Furthermore, Sridhar et al. describe the process of estimating channel characteristics and estimating range through a common startup procedure.

This application does not comply with Section 28.3 of the *Patent Act*. All of the subject matter described and claimed in this application would have been obvious on the claim date to a person skilled in the art of telecommunications engineering to which it pertains having regard to ITU-T Recommendation V.8 bis or Chen or Sridhar et al.

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Indefiniteness

In line 5-6 of claim 14, the expression *and that receives a second predetermined signal* is inexplicit and leads to confusion. It is not clear what receives a second predetermined signal. Claim 14 does not comply with Subsection 27(4) of the Patent Act.

In view of the foregoing defects, the applicant is requisitioned, under Subsection 30(2) of the Patent Rules, to amend the application in order to comply with the Patent Act and the Patent Rules or to provide arguments as to why the application does comply.

Under Section 29 of the *Patent Rules*, applicant is requisitioned to provide an identification of any additional art cited during the prosecution of the European Patent Office application describing the same invention on behalf of the applicant, or on behalf of any other person claiming under an inventor named in the present application, subsequent to applicant's correspondence of May 26, 2003. Similarly, the applicant is requisitioned to provide particulars of conflict, opposition, re-examination or similar proceedings affecting this European Patent Office application. In accordance with Subsection 29(3) of the *Patent Rules*, if there are no such proceedings, this must be stated.

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